

ABSTRACT

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A cross-bar switch includes a set of input ports for receiving data packets and a set of sink ports for transmitting the received packets to identified targets. A set of data rings couples the input ports to the sink ports. Each sink port utilizes the set of data rings to simultaneously accept multiple data packets targeted to the same destination — creating a non-blocking cross-bar switch. Sink ports are also each capable of supporting multiple targets — providing the cross-bar switch with implicit multicast capability.